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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

AVAGO TECHNOLOGIES U.S., INC.; AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE), PTE. LTD; and LAURENCE R. MCCOLLOCH, Plaintiffs, v. NANOPRECISION PRODUCTS, INC., Defendant.	CASE NO. 3:16-cv-03737 JCS **AMENDED AND SUPPLEMENTAL COUNTERCLAIM** **DEMAND FOR JURY TRIAL**
NANOPRECISION PRODUCTS, INC.; MICHAEL K. BARNOSKI; ROBERT R. VALLANCE; SHUHE LI; and KING-FU HII, Counterclaimants, v. AVAGO TECHNOLOGIES LIMITED, USA; AVAGO TECHNOLOGIES U.S., INC.; AVAGO TECHNOLOGIES GENERAL IP (SINGAPORE), PTE. LTD; and LAURENCE R. MCCOLLOCH, Counterdefendants.	

AMENDED AND SUPPLEMENTAL COUNTERCLAIM

1. nanoPrecision Products, Inc. ("nPP"), Michael K. Barnoski, Robert R. Vallance, Shuhe Li, and King-Fu Hii ("Counterclaimants") hereby assert the following Amended and Supplemental Counterclaim against Avago Technologies Limited, USA, Avago Technologies U.S., Inc., and Avago Technologies General IP (Singapore), PTE. Ltd, (collectively, "Avago Technologies"), and Laurence R. McColloch ("McColloch") (together, "Counterdefendants") related to actions for correction of inventorship under 35 U.S.C. § 256, breach of non-disclosure agreements, misappropriation of trade secrets and other additional wrongful conduct designed to interfere with Counterclaimants' intellectual property rights.

NATURE OF THIS AMENDED AND SUPPLEMENTAL COUNTERCLAIM

2. nPP amends its counterclaim pursuant to the Court's order of January 31, 2017. nPP supplements its counterclaim pursuant to Fed. R. Civ. P. 15(d) to assert additional claims for breach of non-disclosure agreements and misappropriation of trade secrets arising from Avago Technologies' use of nPP's proprietary and confidential information to prepare and file U.S. Patent Application No. 15/143,525 and U.S. Patent Application No. 15/224,413. U.S. Patent Application No. 15/224,413 was published on November 17, 2016, after nPP filed its answer and counterclaim. Both applications include the concepts developed by nPP and provided to McColloch and Avago Technologies under the parties' non-disclosure agreements.

PARTIES

3. nPP is a corporation organized and existing under the laws of the State of Delaware, with a principal place of business in El Segundo, California, Los Angeles County, and additional facilities in Camarillo, California. nPP is an innovator and world leader in the field of complex material forming with nanometer accuracies and tolerances. This was accomplished with private investment to develop a high-volume stamping process with sub-micron accuracies to make optical fibers as easy to use as copper wiring. As a result, nPP developed a proprietary manufacturing process and a variety of optical fiber connection methods and products. nPP's proprietary stamping processes can produce a variety of 3D components made of metals such as Kovar, stainless steel, aluminum, copper, or titanium. The stamped components include

microstructures that hold and accurately align optical fibers to electro-optical chips, passive optical elements, or other optical fibers. The locations of the stamped features are accurate to a few hundred nanometers, which is sufficient for single-mode fiber-optic applications.

4. Michael K. Barnoski, Ph.D., co-founded nPP in 2002. Dr. Barnoski is nPP's President and Chief Executive Officer. He has served in these roles since 2002.

5. Robert R. Vallance, Ph.D., is the Chief Technology Officer at nPP. Dr. Vallance has held this position since 2009.

6. Shuhe Li, Ph.D., is an engineer and product manager at nPP. Dr. Li has held this position since 2009.

7. King-Fu Hii, Ph.D., is a tooling and process development manager at nPP. Dr. Hii has held this position at all times relevant to this Counterclaim.

8. Avago Technologies U.S., Inc. ("Avago Inc.") is a Delaware corporation and is located in San Jose, California.

9. Avago Technologies General IP (Singapore), PTE. Ltd ("Avago IP") is a registered Singapore corporation.

10. Avago Technologies Limited, USA ("Avago Limited") is an entity of a form unknown, located in San Jose, California. nPP alleges on information and belief that Avago Limited is an agent, alter ego and/or fictitious business name of one of the other Avago Technologies counterdefendants.

11. Avago Technologies is a Singapore-based group of companies and subsidiaries that provides an extensive range of analog, mixed-signal and optoelectronic components and subsystems. Avago Technologies provides various optoelectronic components for fiber optic communication.

12. McColloch at all times relevant was an employee of Avago Technologies located in San Jose, California.

JURISDICTION

13. This Court has jurisdiction by 28 U.S.C. §§ 1331 and 1338 and 18 U.S.C. § 1836(c) because this action arises under the Patent Laws of the United States of America (Title 35

of the United States Code) and the Federal Defend Trade Secrets Act of 2016 (Chapter 90 of Title 18 of the United States Code). This Court has subject matter jurisdiction over the remaining claims pursuant to 28 U.S.C. § 1367.

nPP'S INTERACTIONS WITH AVAGO TECHNOLOGIES

14. In July of 2010, nPP began communicating with Avago Technologies regarding nPP's capabilities to precision stamp various components for fiber optic applications, including optical benches. The details of such precision stamping techniques as well as the structure of such components were and are highly confidential and proprietary to nPP and were at all times treated as trade secrets.

15. On July 14, 2010, Avago Limited signed a confidential disclosure agreement which was sent to nPP. On July 16, 2010, nPP counter-signed the agreement (hereinafter "NDA"). A true and correct copy of the NDA is attached hereto as Exhibit A and incorporated herein. nPP required such an agreement be in place before it agreed to discuss its proprietary capabilities, so that its confidential information and trade secrets would remain protected. In addition to requiring Avago Limited to hold the information disclosed by nPP in confidence, the NDA also restricted Avago Limited's use of nPP's information solely for the evaluation of nPP's solutions for use in Avago's products.

16. On July 16, 2010, representatives of nPP and Avago Technologies had their first in-person meeting. Laurence R. McColloch ("McColloch") attended this meeting for Avago Technologies along with Wayne Grubbs, Technology Access and Alliance Manager, Catherine Chen, Product R&D Engineer for the Fiber Optic products Division and Andrew Schmidt, a test engineer.

17. During this meeting, nPP presenters provided information under the NDA describing the company's innovative stamping technology and products in development. nPP described the design of a stamped fiber-optic component with a ball lens. This stamped component represents an optical bench. Avago Technologies was currently using an etched silicon bench that held a ball lens in their products. nPP's process represented a substantial improvement over the silicon bench product used by Avago Technologies. McColloch stated that

he was unaware of the possibility of using a stamped bench in place of a silicon bench in such optoelectronic applications.

18. During the meeting, nPP also explained that their proprietary processes make it possible to stamp flat mirror surfaces. McColloch was particularly interested in the ability to stamp a flat fold mirror and incorporate it into an optical bench that can bend light beams.

19. Throughout the course of this meeting and subsequent meetings, McColloch asked many questions to solicit nPP's proprietary and confidential information. McColloch represented that he did not know much about stamping components.

20. On July 30, 2010, nPP sent information to Avago Technologies that was marked as confidential and proprietary. This information included a stamped flat mirror surface and results of testing with the use of such a mirror.

21. On August 17, 2010, McColloch sent a CAD file to nPP with additional design information.

22. On August 25, 2010, another in-person meeting was held. McColloch attended this meeting.

23. At the August 25, 2010 meeting, nPP showed more stamping process details and discussed more stamped mirror experiments using copper. All documents presented were marked as nPP confidential and proprietary and the discussions were held under the terms of the NDA then in place. At this meeting, nPP suggested that Avago Technologies use a stamped copper substrate with grooves that are coated in Avago Technologies' products.

24. At the August 25, 2010 meeting, McColloch discussed the technical requirements of Avago Technologies and stated that if nPP could demonstrate the ability to design and manufacture a stamped miniature optical bench for passive alignment, Avago Technologies would be very interested in being a development partner with nPP.

25. Spurred on by these encouraging words, nPP sent a design of a Micro Optical Bench ("MOB") and a strip layout to McColloch on September 16, 2010. The document was marked as nPP confidential and proprietary. The bench design included pockets to hold a laser, photodiode and ball lens and included a stamped flat mirror with gold plating.

26. Following up on the September 16 disclosure, nPP provided more confidential and proprietary information to Avago Technologies in an email message to McColloch on September 27, 2010. nPP provided details about slides illustrating their proposed design for a stamped MOB, made of copper. The slides illustrated an overview of the evolution of the part's optical bench's geometry throughout the stamping process (strip layout) to produce the MOB. This design included a stamped fold mirror, an alignment pocket for placement of a ball lens, an alignment pocket for an edge-emitting laser, and an alignment pocket for a photodiode.

27. On October 5, 2010, nPP had another meeting with Avago Technologies. McColloch attended the meeting on behalf of Avago Technologies. McColloch at this meeting presented his design for a stamped copper MOB, which incorporated and relied upon nPP concepts previously provided under the NDA to McColloch. nPP suggested further design modifications as it was clear from the design that McColloch provided, that he did not fully understand the capabilities of the stamping process.

28. Following this meeting, nPP prepared solid models showing a 2-up strip layout of stamped micro optical benches. It included wings/gussets connecting to a flat mirror surface and two bulls-eye fiducials. nPP prepared a PowerPoint deck, and the slides were marked as nPP confidential and proprietary and sent to McColloch at Avago Technologies.

29. nPP continued to work on a design of a MOB and prepared slides showing the design and data evidencing that nPP could stamp miniature flat mirrors. A presentation of this material, marked as nPP confidential and proprietary was made to McColloch on January 11, 2011. McColloch expressed an interest and asked many questions regarding nPP's ability to stamp non-flat optical elements, such as spheres, that can both bend and focus an optical beam. nPP was already designing aspherical micro mirrors for connecting optical fibers to photonic devices and subsequently brought this development activity to McColloch's attention.

30. The next meeting with Avago Technologies occurred on April 12, 2011 and involved a large group of Avago Technologies employees including McColloch and his supervisor Chung-yi Su ("Su"), who was identified as the R&D director for the Fiber Optic Products Division and Maryam Aminian ("Aminian") who was identified as Vice-President

Engineering. At this meeting nPP provided additional information and accompanying PowerPoint slides marked nPP proprietary and confidential, which demonstrated that nPP could stamp optical quality flat surfaces, disclosed the design of a MOB with a single-fiber groove and stamped micro mirror (reflector) with stamped fiducials, and proposed elimination of the ball lens by using a curved mirror (reflector) stamped as part of the copper bench. nPP also provided information and accompanying PowerPoint slides marked nPP proprietary and confidential which demonstrated nPP's low profile fiber optic connector concept, having an opening at its side wall for receiving a portion of an optical fiber with a groove formed in it and a reflector disposed in a recess formed adjacent to an end of the groove.

31. On April 27, 2011, nPP met again with Avago Technologies. This time, Phillip Gadd, Vice President and General Manager of the Fiber Optics Products Division – joined the meeting with others from Avago Technologies, including McColloch, Aminian and Su. nPP again presented its confidential information in a PowerPoint deck marked nPP confidential and proprietary and discussed the same. The subjects discussed included an nPP designed MOB having a single-fiber, single-direction miniature active optical cable ("AOC") with a stamped groove for holding the fiber. nPP's miniature AOC component has an opening at its side wall for receiving a portion of an optical fiber at a non-zero degree angle α, relative to an axis that is generally normal to a printed circuit board, with a groove for accepting a portion of the optical fiber and a mirror that folds an optical pathway by the angle α, and with a recess formed adjacent to an end of the groove, wherein the reflector is disposed opposite the end of the groove. The groove allows mounting the optical fiber in an aligned position such that the optical axis of the fiber is in optical alignment with the concave mirror. nPP also discussed the use of a stamped optical bench as part of the body portion of a module housing that encloses a transceiver. Avago Technologies indicated little interest in this particular design at the time.

32. On June 22, 2011, McColloch had a telephone and video conference with nPP, at which time McColloch indicated his interest in having nPP design and produce two versions of stamped micro optical benches.

33. On June 24, 2011, nPP met with McColloch and Su again. nPP disclosed information marked as nPP confidential and proprietary including an update on the status of miniature active optical cables. nPP described its machined prototype MOB featuring an opening in the side wall for receiving a portion of optical fiber, a groove for fiber retention, a recess adjacent to the end of the groove with a stamped aspheric mirror integral to the component disposed in the recess, and fiducials to align the transmitter ("VCSEL" or "laser") or receiver ("PIN"). Additionally, nPP described its prototype of a MOB with similar features that was stamped in copper. An optical fiber was also assembled into the stamped MOB.

34. During the June 24, 2011 meeting, McColloch acknowledged that pricing should include the substantial nPP intellectual property for parts which nPP would provide to Avago Technologies under a supply agreement.

35. Su noted that in this instance because of nPP's unique and proprietary technology, payment of non-recurring expenses may be justified. This was confirmed with agreement by McColloch.

36. Su requested a budget from nPP on a three-phase plan.

37. Thereafter, nPP asked McColloch for some additional information to prepare the budgetary quote, but Avago Technologies representatives represented to nPP that McColloch had been diverted to another project and the discussions between the parties ceased for some period. nPP's Robert King visited Avago Technologies on October 20, 2011 and McColloch told him that while he was currently off the project that would incorporate a stamped MOB, he nevertheless advised that he believed the project was valid.

38. On February 9, 2012, Avago Technologies again met with nPP. McColloch advised he was now back on the project and that the project for a stamped MOB was back on and funded at least for the concept stage.

39. On May 30, 2012, nPP met again with Avago Technologies. Gadd, Aminian, McColloch and others attended for Avago Technologies. nPP was concerned that the originally executed NDA had by then expired, and required a new non-disclosure agreement be signed before any additional discussions were held. Avago Inc. agreed and a new agreement on an

Avago Technologies form was prepared and signed ("NDA II"). A true and correct copy of the NDA II is attached hereto as Exhibit B and incorporated herein. In addition to requiring Avago Inc. to hold the information disclosed by nPP in confidence, the NDA II also restricted Avago Inc.'s use of nPP's confidential information solely for the evaluation of nPP's solutions for use in Avago's products for a potential business relationship.

40. Following execution of the NDA II, a technical and business discussion was held between representatives of nPP and Avago Technologies concerning nPP's development of the stamped MOB. nPP's marked proprietary and confidential information and trade secrets were provided to Avago Technologies. Gadd said that Avago Technologies will agree to the requested up-front $195,000 good faith payment. Gadd added he considered it to be Avago Technologies having "skin in the game."

41. Other terms and conditions were discussed with respect to Avago Technologies exclusively procuring the contemplated stamped MOB product from nPP including entry into a Joint Development Project.

42. Gadd stated at the end of the meeting that "in principal we have a deal."

43. Subsequent efforts by nPP to memorialize the deal, however, were rebuffed by Avago Technologies. Avago Technologies' Wayne Grubbs emailed nPP's Robert King in or around July 24, 2012 that there would be no deal. No explanation was provided by Avago Technologies for their change of mind.

44. nPP never heard from McColloch or Avago Technologies again concerning the stamped MOB projects after August of 2012.

AVAGO TECHNOLOGIES USES NPP'S PROPRIETARY AND CONFIDENTIAL INFORMATION IN PATENT FILINGS

45. At some point following McColloch's first meeting with nPP on July 16, 2011, Avago Technologies and McColloch began to work on a patent application for a Stamped Metal Optic for Use in an Optical Communications Module. Avago IP and McColloch brazenly used nPP's proprietary and confidential information as the primary basis to prepare the application.

This application, No. 13/658,379 (the "'379 Application"), was filed on October 23, 2012, and listed McColloch as the sole inventor and was assigned to Avago IP.

46. On April 24, 2014 the United States Patent and Trademark Office published the '379 Application. A true and correct copy of the '379 Application is attached hereto as Exhibit C and incorporated herein. This application included the concepts developed by nPP and provided to McColloch and Avago Technologies under the NDA and NDA II, which were clearly marked and identified as confidential and proprietary to nPP including: a stamped bench with a curved mirror or a flat mirror, a fiducial for a pick-and-place operations with visual alignment, gussets for structural integrity of the mirror surface, pockets for locating a ball lens, and pockets with alignment edges for accurately locating electro-optical chips such as edge-emitting lasers or photodiodes.

47. Neither McColloch nor anyone else at Avago Technologies had ever notified nPP that the '379 Application was being prepared or was filed.

48. After learning of the publication, in August of 2014, nPP through its counsel notified Avago Technologies of the improper misappropriation, disclosure, and use of nPP confidential and proprietary information in connection with the patent filing and attempted to resolve the situation in an amicable fashion. Avago Technologies rebuffed these efforts and specifically refused to return by assignment the misappropriated confidential and proprietary information.

49. McColloch and Avago Technologies thereafter continued to prosecute the '379 Application at the PTO, including by filing a Notice of Appeal on March 4, 2016, and an Appeal Brief on July 5, 2016, that requests the Board to reverse the Examiner's rejections of claims. This continued prosecution evidences further misappropriation, disclosure, and use of nPP confidential and proprietary information by Avago Technologies and McColloch. The publically available Appeal Brief discloses concepts developed by nPP and provided to McColloch and Avago Technologies under the NDA and NDA II, which were clearly marked and identified as confidential and proprietary to nPP including a stamped bench with a curved mirror or a flat mirror, a fiducial for a pick-and-place operations with visual alignment, gussets for structural

integrity of the mirror surface, pockets for locating a ball lens, and pockets with alignment edges for accurately locating electro-optical chips such as edge-emitting lasers or photodiodes.

50. In February 2016, nPP learned that McColloch and Avago Technologies had filed a second application on December 19, 2011 entitled Modified Transistor Outline (TO)-CAN Assembly For Use In Optical Communications And A Method, U.S. Patent Application 13/329,380. This application matured into U.S. Patent No. 9,011,025 B2 (the "'025 Patent") and issued on April 21, 2015. A true and correct copy of the '025 Patent is attached hereto as Exhibit D. Prior to the issuance of the '025 Patent, Avago filed U.S. Patent Application 14/666,427, which published on July 9, 2015 (the "'427 Application"). The '427 Application matured into U.S. Patent No. 9,400,360 (the "'360 Patent") and issued on July 26, 2016. A true and correct copy of the '360 Patent is attached hereto as Exhibit E.

51. The application which led to the '025 Patent, and has the same specification as that which led to the '360 Patent, also used nPP's proprietary and confidential information as the primary basis to prepare the applications. These two applications included the concepts developed by nPP and provided to McColloch and Avago Technologies under the NDA and NDA II, which were clearly marked and identified as confidential and proprietary to nPP including a fiber optic connector component with an opening at its side wall for receiving a portion of an optical fiber at a non-zero degree angle α, relative to an axis that is generally normal to a printed circuit board, with a groove formed in it for accepting a portion of the optical fiber, with a reflector (mirror) that folds an optical pathway by the angle α, and with a recess formed adjacent to an end of the groove, wherein the reflector is disposed opposite the end of the groove.

52. On April 30, 2016, Avago Technologies filed U.S. Patent Application No. 15/143,525 ('525 Application), listing McColloch as the sole inventor. The '525 Application was assigned to Avago IP. Although the '525 Application has not yet been published, the '525 Application was made publicly available after the publication of U.S. Patent Application No. 15/224,413, which is a continuation-in-part of the '525 Application. A true and correct copy of the '525 Application is attached hereto as Exhibit F. The '525 Application includes the concepts developed by nPP and provided to McColloch and Avago Technologies under the NDA and NDA

II, which were clearly marked and identified as confidential and proprietary to nPP, including an optical transceiver module with a stamped bench and a mirror surface designed to reflect light beams by about 90 degrees relative to the angle of incidence. The '525 Application includes confidential and proprietary information from nPP and concepts derived from nPP's confidential and proprietary information that were not previously disclosed in the '379 Application or the applications that led to the '025 and '360 Patents. For example, the '525 Application discloses the use of a stamped optical bench as part of the body portion of a module housing that encloses a transceiver, as well as the use of two stamped mirrors on a single optical bench. In the '525 Applications, one of these mirrors is used to fold and collimate the light exiting the edge-emitting laser, an approach that nPP communicated to Avago Technologies in early conversations to eliminate the ball lens in the '379 Application.

53. On July 29, 2016, Avago Technologies filed U.S. Patent Application No. 15/224,413 ('413 Application), also listing McColloch as the sole inventor. The '413 Application is a continuation-in-part of the '525 Application. The '413 Application was assigned to Avago IP and was published on November 17, 2016. A true and correct copy of the '413 Application is attached hereto as Exhibit G. The '413 Application includes the concepts developed by nPP and provided to McColloch and Avago Technologies under the NDA and NDA II, which were clearly marked and identified as confidential and proprietary to nPP, including a stamped metal optic for folding the optical pathway, a metal lead frame forming the lower body portion of the optical transceiver module, a mirror surface designed to redirect collimated light beams by an angle of 90 degrees, the use of a stamping punch tool formed by diamond turning, a fiduciary feature formed in the stamped metal optic for alignment of electro-optical chips, and a pick-and-place machine with a vision system for mounting a submount device on a mounting surface. The '413 Application includes confidential and proprietary information from nPP and concepts derived from nPP's confidential and proprietary information that were not previously disclosed in the '379 Application or the applications that led to the '025 and '360 Patents. For example, the '413 Application discloses the use of a stamped optical bench as part of the body portion of a module housing that encloses a transceiver, as well as the use of two stamped mirrors on a single optical

bench. In the '413 Application, one of these mirrors is used to fold and collimate the light exiting the edge-emitting laser, an approach that nPP communicated to Avago Technologies in early conversations to eliminate the ball lens in the '379 Application.

54. Neither McColloch nor anyone else at Avago Technologies had ever notified nPP that the '379 Application (Exhibit C), the application which led to the '025 Patent (Exhibit D), and the application which led to the '360 Patent (Exhibit E) (collectively the "Avago Applications I"), or the '525 Application (Exhibit F), and the '413 Application (Exhibit G) (collectively the "Avago Applications II") were being prepared, filed, or were in fact issued as a patent by the United States Patent and Trademark Office.

55. The '025 Patent and the '360 Patent each identifies Mr. McColloch as sole inventor.

56. The actual inventors of the subject matter claimed in the '025 Patent and '360 Patent are Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii.

57. As the assignee of the inventions of its employees Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii, nPP has an interest in the '025 Patent and the '360 Patent.

CAUSES OF ACTION

FIRST CAUSE OF ACTION

(For Breach of Written Contract Brought by nPP Against Avago Limited and Avago Inc.)

58. nPP realleges and incorporates herein by reference, paragraphs 1-57 inclusive.

59. The NDA and NDA II agreements were entered into by Avago Limited and Avago Inc. respectively with nPP. Such agreements are attached as Exhibits A and B and incorporated herein. Such agreements by their terms bind all Related Companies to whom such information is provided, including Avago IP.

60. Avago Limited misused and disclosed, or caused Avago IP to misuse and disclose, nPP's confidential information and thus breached the NDA by, among other things, filing the Avago Applications I. The filing of the Avago Applications I not only misused nPP's confidential and proprietary information for Counterdefendants' own benefit, but also disclosed

such information to the world when the applications were published and again when the '025 Patent and the '360 Patent issued.

61. Avago Inc. misused and disclosed, or caused Avago IP to misuse and disclose, nPP's confidential information and thus breached the NDA II by filing in the United States Patent and Trademark Office the Avago Applications I including the marked, and by consistent treatment, confidential and proprietary information of nPP.

62. Avago Limited misused and disclosed, or caused Avago IP to misuse and disclose, nPP's confidential information and thus breached the NDA by, among other things, using nPP's confidential information in preparing and filing the Avago Applications II. The filing of the Avago Applications II not only misused nPP's confidential and proprietary information for Counterdefendants' own benefit, but also disclosed such information to the world when the '413 Application was published and the '525 Application was made publicly available.

63. Avago Inc. misused and disclosed, or caused Avago IP to misuse and disclose, nPP's confidential information and thus breached the NDA II by filing in the United States Patent and Trademark Office the Avago Applications II.

64. As a result of the misuse and disclosure of nPP's confidential information in violation of the NDA and NDA II, nPP has suffered damage by the use and publication of its confidential and proprietary information and Avago Technologies has been unjustly enriched.

SECOND CAUSE OF ACTION

(For Misappropriation of Trade Secrets Under California Civil Code Section 3426 Et Seq. Brought by nPP Against Avago Limited, Avago Inc., Avago IP and McColloch)

65. nPP realleges and incorporates herein by reference, paragraphs 1-64 inclusive.

66. As described above, Avago Technologies acquired nPP confidential and proprietary trade secret information pursuant to the NDA and NDA II, which required Avago Technologies to maintain the secrecy of such trade secret information.

67. Avago Technologies, without the express or implied consent of nPP, took nPP's confidential and proprietary information and included it in the Avago Applications I naming McColloch as the inventor. The Avago Applications I disclosed such information to the world

when the applications were published and again when the '025 Patent and the '360 Patent issued, destroying the confidentiality and secrecy of the information provided under the NDA and NDA II.

68. Avago Technologies misused nPP's confidential and proprietary information to prepare and file the Avago Applications II, which disclosed such information to the world when the '413 Application was published and the '525 Application was made publicly available.

69. McColloch and others at Avago Technologies knew that the information was confidential and proprietary to nPP through the course of conduct between them.

70. At all relevant times, nPP took all reasonable measures to protect the secrecy and confidential nature of the information including by entering into the NDA and NDA II, marking written materials as nPP confidential and proprietary prior to disclosure to Avago Technologies, and discussing the information with Avago Technologies' employees by referring to the information as confidential and proprietary to nPP.

71. nPP has suffered damage by the use and publication of its confidential and proprietary information and Avago Technologies has been unjustly enriched from that misappropriation

THIRD CAUSE OF ACTION

(For Conversion Brought by nPP Against Avago Limited, Avago Inc. and Avago IP, in the Alternative)

72. nPP realleges and incorporates herein by reference, paragraphs 1-71 inclusive.

73. nPP asserts this claim in the alternative, in the event it is determined that any of nPP's confidential and propriety information improperly used by Counterdefendants do not constitute trade secrets under the CUTSA.

74. nPP is the owner of the materials, documents, files, and models provided to McColloch and Avago Technologies under the NDA and NDA II as set forth above. These materials, documents, files, and models contain nPP's confidential and proprietary information. nPP incurred expense to procure and prepare these materials for its meetings with Avago Technologies, including valuable time spent by nPP's employees to compile these materials into

presentable form. As alleged above, Avago Technologies is in possession of nPP's materials, documents, files, and models marked confidential and proprietary and disclosed by nPP to Avago Technologies under the NDA and NDA II. nPP is entitled to possession of such withheld materials, documents, files, and models provided under the NDA or NDA II.

75. Avago Technologies improperly took nPP's property, without nPP's consent, in the form of improperly withheld materials, documents, files, and models.

76. nPP has demanded return of its property by asking for the return of its materials, documents, files, and models provided to Avago Technologies under the NDA and NDA II, but Avago Technologies has refused nPP's demands.

77. nPP has suffered and continues to suffer damage by Avago Technologies' improper possession, use, and publication of nPP's materials, documents, files and models containing nPP's confidential and proprietary information.

FOURTH CAUSE OF ACTION

(For Declaratory Relief Brought by nPP Against all Counterdefendants)

78. nPP realleges and incorporates herein by reference, paragraphs 1-77 inclusive.

79. nPP is entitled to written contract rights and Counterdefendants are owed certain obligations under such contracts covered by Cal. Code Civ. Pro. § 1060 as alleged above. nPP is also entitled to property rights in the Avago Applications I and Avago Applications II and any others derived from nPP confidential information shared with Avago Technologies under the NDA and NDA II.

80. An actual and judiciable controversy exists between nPP and Counterdefendants concerning contract rights and the obligations of Counterdefendants under such contracts, as well as the property rights in the Avago Applications I and Avago Applications II and any others derived from nPP confidential information shared with Avago Technologies under the NDA and NDA II.

81. nPP has suffered damage by the use and publication of its confidential and proprietary information and trade secrets, as well as by being deprived of its own right if elected to seek patent protection for such information in whole or part. nPP seeks a declaration of its

contract and property rights, including rights in the Avago Applications I and Avago Applications II and any others derived from nPP confidential and proprietary information or trade secrets shared with Avago Technologies.

FIFTH CAUSE OF ACTION

(For Trade Secret Misappropriation Under the Defend Trade Secrets Act of 2016 Brought by nPP Against Avago Limited, Avago Inc., Avago IP and McColloch)

82. nPP realleges and incorporated herein by reference, paragraphs 1-81 inclusive.

83. This is a cause of action for damages and an injunction arising under the Defend Trade Secrets Act of 2016, 18 U.S.C. § 1836.

84. Avago Technologies and McColloch misappropriated confidential and proprietary trade secrets belonging to nPP related to nPP's fiber optic system components and design and manufacturing services used in, or intended for use in, interstate or foreign commerce.

85. Avago Technologies acquired nPP's confidential and proprietary trade secret information pursuant to the NDA and NDA II, which required Avago Technologies to maintain the secrecy of such trade secret information.

86. Avago Technologies, without the express or implied consent of nPP, misused nPP's confidential and proprietary information to prepare and file the Avago Applications II. The filing of the Avago Applications II not only misused nPP's confidential and proprietary information for Counterdefendants' own benefit, but also disclosed such information to the world, when the '413 Application was published on November 17, 2016 and when the '525 Application was made publicly available after the publication of the '413 Application.

87. McColloch and others at Avago Technologies knew that the information was confidential and proprietary to nPP through the course of conduct between them.

88. At all relevant times, nPP took all reasonable measures to protect the secrecy and confidential nature of the information including by entering into the NDA and NDA II, marking written materials as nPP confidential and proprietary prior to disclosure to Avago Technologies, and discussing the information with Avago Technologies' employees by referring to the information as confidential and proprietary to nPP.

89. nPP has suffered damage and irreparable injury by the use and publication of its confidential and proprietary information and Avago Technologies has been unjustly enriched from that misappropriation.

SIXTH CAUSE OF ACTION

(For Correction of Named Inventor on the '025 Patent Brought by All Counterclaimants Against All Counterdefendants)

90. Counterclaimants reallege and incorporated herein by reference, paragraphs 1-89 inclusive.

91. This is a cause of action for correction of named inventor pursuant to 35 U.S.C. § 256 with respect to the '025 Patent.

92. The '025 Patent incorrectly identifies Mr. McColloch as sole inventor. nPP employees Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr Hii are the true and first inventors of the subject matter claimed in the '025 Patent. Mr. McColloch derived the subject matter claimed in the '025 Patent from nPP.

93. Counterclaimants each have a recognized interest in having the inventorship of the '025 Patent changed to reflect that Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii are the true inventors and that Mr. McColloch is not an inventor. Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii have concrete financial and reputational interests in the '025 Patent correctly identifying them as inventors, including remuneration from their employer nPP and prestige. Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii each are employed in the field of the inventions in the '025 Patent. For each of them, being a named inventor on the '025 Patent would be a mark of success in the field of their career and would affect their employment conditions and prospects. nPP, as the assignee of the inventions of its employees, has interests in the '025 Patent correctly identifying its employees as inventors.

94. Counterdefendants each allege to have a recognized interest in the '025 Patent that could be adversely affected by an action brought by nPP under 35 U.S.C. § 256.

95. Counterclaimants are entitled to a judgment declaring that the inventorship of the '025 Patent be changed to reflect that Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii are the inventors and Mr. McColloch is not an inventor.

SEVENTH CAUSE OF ACTION

(For Correction of Named Inventor on the '360 Patent Brought by All Counterclaimants Against All Counterdefendants)

96. Counterclaimants reallege and incorporated herein by reference, paragraphs 1-95 inclusive.

97. This is a cause of action for correction of named inventor pursuant to 35 U.S.C. § 256 with respect to the '360 Patent.

98. The '360 Patent incorrectly identifies Mr. McColloch as sole inventor. nPP employees Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr Hii are the true and first inventors of the subject matter claimed in the '360 Patent. Mr. McColloch derived the subject matter claimed in the '360 Patent from nPP.

99. Counterclaimants each have a recognized interest in having the inventorship of the '360 Patent changed to reflect that Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii are the true inventors and that Mr. McColloch is not an inventor. Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii have concrete financial and reputational interests in the '360 Patent correctly identifying them as inventors, including remuneration from their employer nPP and prestige. Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii each are employed in the field of the inventions in the '360 Patent. For each of them, being a named inventor on the '360 Patent would be a mark of success in the field of their career and would affect their employment conditions and prospects. nPP, as the assignee of the inventions of its employees, has interests in the '360 Patent correctly identifying its employees as inventors.

100. Counterdefendants each allege to have a recognized interest in the '360 Patent that could be adversely affected by an action brought by nPP under 35 U.S.C. § 256.

101. Counterclaimants are entitled to a judgment declaring that the inventorship of the '360 Patent be changed to reflect that Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii are the inventors and Mr. McColloch is not an inventor.

PRAYER FOR RELIEF

WHEREFORE, Counterclaimants request the following:

A. A constructive trust providing nPP sole ownership of U.S. Patent Application 13/658,379, U.S. Patent No. 9,011,025, U.S. Patent No. 9,400,360, U.S. Patent Application No. 15/143,525, U.S. Patent Application No. 15/224,413, and any other patents or patent applications derived from nPP confidential and proprietary information or its trade secrets;

B. The return to nPP of all nPP materials in the possession of Avago Technologies, including any materials, documents, files, and models that were provided by nPP to Avago Technologies;

C. For compensatory damages according to proof, together with interest thereon for all damages caused by Avago Technologies;

D. For restitution and cooperation for Avago Technologies' unjust enrichment including the cooperation of McColloch and Avago Technologies in prosecuting for the benefit of nPP the U.S. Patent Application 13/658,379, U.S. Patent No. 9,011,025, U.S. Patent No 9,400,360, U.S. Patent Application No. 15/143,525, U.S. Patent Application No. 15/224,413, and any other patents or patent applications derived from nPP confidential and proprietary information or its trade secrets;

E. For a declaration that nPP is the proper owner of U.S. Patent Application 13/658,379, U.S. Patent No. 9,011,025, U.S. Patent No. 9,400,360, U.S. Patent Application No. 15/143,525, U.S. Patent Application No. 15/224,413, and any other patent applications filed in any jurisdiction that contain nPP's proprietary and confidential information and trade secrets;

F. For a declaration the inventorship of the '025 Patent and the '360 Patent be changed to reflect that Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii are the inventors and Mr. McColloch is not an inventor.

G. For an injunction to prevent misappropriation by Avago Technologies and

McColloch and, if determined appropriate, requiring affirmative actions to be taken to protect nPP's confidential and proprietary information or its trade secrets;

H. For punitive damages in an appropriate amount to be determined by a jury or the Court as appropriate;

I. For nPP's attorneys' fees and costs in this matter; and

J. For such other and further relief as the Court may deem just and proper.

JURY DEMAND

In accordance with Civil Local Rule 3-6, nPP, Dr. Barnoski, Dr. Vallance, Dr. Li, and Dr. Hii hereby demand a jury trial on all the issues so triable.

Dated: March 2, 2017

MORRISON & FOERSTER LLP

By: */s/ Vincent J. Belusko*
Vincent J. Belusko

Attorneys for Defendant and Counterclaimant NANOPRECISION PRODUCTS, INC. and Counterclaimants MICHAEL K. BARNOSKI; ROBERT R. VALLANCE; SHUHE LI; and KING-FU HII.